Name:_____ HW108 - special right triangles

Mr. Tiénou-Gustafson & Mr. Bielmeier

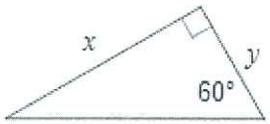
Geometry, Period_____

Due Date: Wed, 25 Feb 2015 ***Failure to show all work will result in LaSalle.***

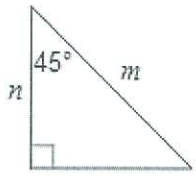
Geometry Homework

Find ALL missing side lengths for #1-7 Form A

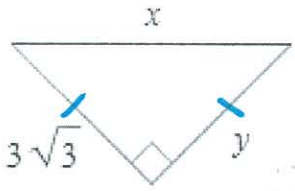
1)



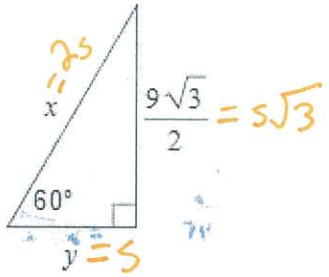
2)



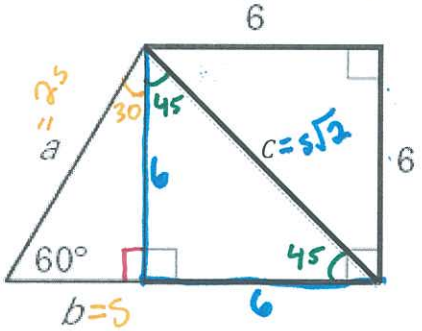
3) The triangle below is a right isosceles triangle.



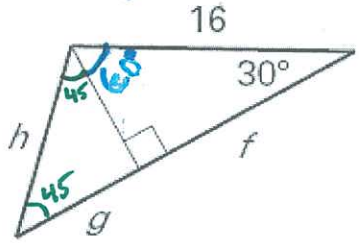
4)



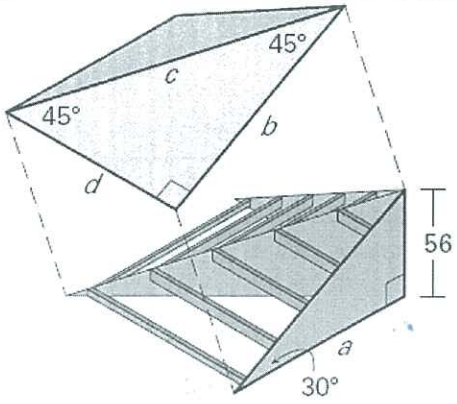
5)



6)



~~7)~~ You are using wood to build a pyramid-shaped skateboard ramp. You want each ramp surface to incline at an angle of 30° and the maximum height to be 56 centimeters as shown. (Note that side "b" is a line in both triangles.)



Use the relationships shown in the diagram to determine the approximate lengths of...

a:

b:

c:

d:

8) The side lengths of a triangle are given. Determine whether it is a *45°-45°-90° triangle,* a *30°-60°-90° triangle,* or *neither.*

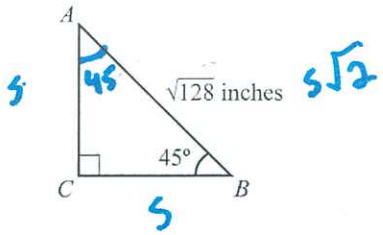
a. 5, 10, $5\sqrt{3}$

b. 6, 6, $6\sqrt{2}$

Define Your Pride.

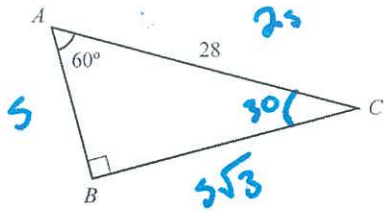
ACT-style questions. Continue showing your work, including drawing & labeling a sketch if none is given.

11) In the figure shown below, how many inches long is $\overline{AC}$?



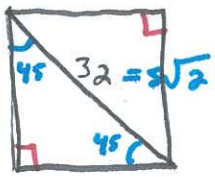
F. 8
G. $8\sqrt{2}$
H. $8\sqrt{3}$
J. 16
K. $16\sqrt{2}$

12) In the right triangle shown below, $AC = 28$ feet and $m\angle A = 60°$. What is the length, in feet, of $\overline{BC}$?



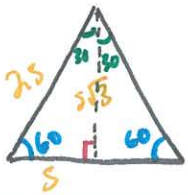
F. 7
G. 14
H. $14\sqrt{2}$
J. $14\sqrt{3}$
K. Cannot be determined from the given information

9) The length of a diagonal of a square is 32 feet. What is the length, in feet, of one side of the square?



F. $16\sqrt{2}$
G. $16\sqrt{3}$
H. 16
J. $32\sqrt{2}$
K. $32\sqrt{3}$

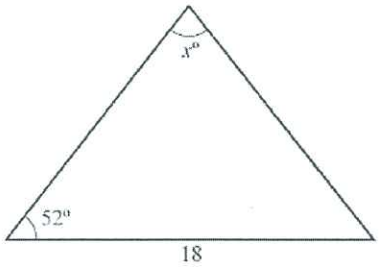
10) One side of equilateral triangle ΔABC is 12 cm long. What is the height, in centimeters, of the triangle?



A. 6
B. $6\sqrt{2}$
C. $6\sqrt{3}$
D. 12
E. $12\sqrt{3}$

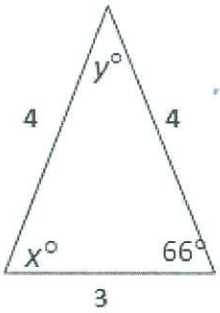
Spiraled Review

1. The triangle shown below has a perimeter of 80. What is the value of x?

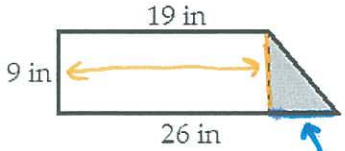


F. 38
G. 52
H. 55
J. 76
K. Cannot be determined from the given information.

2. Find the value of x and y



3. Find the area of the shaded triangle.



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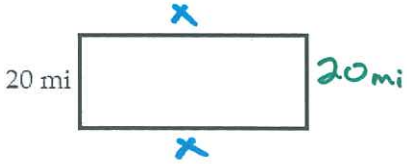
A. 16.0 in²
B. 22.5 in²
C. 31.5 in²
D. 63.0 in²

4. The rectangle below has a perimeter of 110 miles. What is its area?



A. 700 mi²
B. 1400 mi²
C. 1800 mi²
D. 2200 mi²